

Notice of Allowability

Application No.

10/785,099

Examiner

Stephen G. Sherman

Applicant(s)

CHEN, CHING-CHUAN

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 23 December 2007.
2. ☒ The allowed claim(s) is/are 2,3,5-8,12-22,24 and 25.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Daniel McClure on 28 January 2008.

2. The application has been amended as follows:

Please amend claim 2 as follows:

2. A liquid crystal display device comprising:

- a plurality of gate lines formed in parallel to each other;
- a plurality of source lines formed in parallel to each other and orthogonal to the gate lines;
- an array of cells formed in rows and columns, each of the cells being formed near an intersection of one of the gate lines and one of the source lines;
- a first transistor of each of the cells disposed at an N-th row and M-th column, N and M being integers, driven by an (N-2)-th gate line, wherein the first transistor

includes a gate coupled to the (N-2)-th gate line, a first terminal directly connected to the an electrode, and a second terminal coupled to the M-th source line;

a second transistor of the each of the cells driven by an N-th gate line, wherein the second transistor includes a gate coupled to the N-th gate line, a first terminal directly connected to the electrode, and a second terminal coupled to the M-th source line; and

a first capacitor of each of the cells formed between ~~an~~ the electrode and the (N-2)-th gate line.

Please amend claim 8 as follows:

8. A liquid crystal display device comprising:

a plurality of gate lines formed in parallel to each other;

a plurality of source lines formed in parallel to each other and orthogonal to the gate lines; and

an array of cells formed in rows and columns, each of the cells disposed near an intersection of an N-th gate line and an M-th source line, N and M being integers, further comprising:

a first capacitor formed between an electrode and an (N-2)-th gate line;

a second capacitor formed between the electrode and an (N-1)-th gate line;

a first transistor including a gate coupled to the (N-2)-th gate line, a first terminal directly connected to the electrode, and a second terminal coupled to the M-th source line; and

a second transistor including a gate coupled to the N-th gate line, a first terminal ~~coupled to the~~ directly connected to the electrode, and a second terminal coupled to the M-th source line.

Allowable Subject Matter

3. Claims 2-3, 5-8, 12-22 and 24-25 are allowed.
4. The following is an examiner's statement of reasons for allowance:

The primary reason for allowance is the inclusion of the limitations of the specific connections of the first and second transistors, along with the recitation of the connection of the capacitor and the other recited component, which are not found singularly or in combination within the prior art.

The closest available prior art references (Fujiwara and Park), fail to teach this combination of elements. Park discloses a pixel with two transistors, one with a gate connected to the Nth line and one with a gate connected to the (N-2)th gate line, while Fujiwara discloses a cell in which a capacitor is formed between an electrode and the (N-2)th gate line, however, Park makes no disclosure of having a capacitor in the pixel

cells while Fujiwara discloses only of one transistor in each pixel cell. Furthermore, the claims require that each transistor is directly connected to the electrode. Park only discloses one transistor in direct contact with the electrode, while the other transistor is not in direct contact with the electrode (See Park, Figure 4 as compared to the present specification, Figure 3A). Therefore, the references, alone or in combination, fail to meet each the claimed limitations.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen G. Sherman whose telephone number is (571) 272-2941. The examiner can normally be reached on M-F, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
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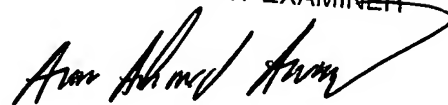
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SS

28 January 2008

AMR A. AWAD
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read "Amr A. Awad", written over the printed name and title.